



**PATENT**  
**Customer No. 26874**

**THE UNITED STATES PATENT & TRADEMARK OFFICE**

Applicant: Raymond R. Nieser, et al : Paper No:  
Serial No. 10/800,070 : Group Art Unit: 3651  
Filed: March 12, 2004 : Examiner: Bidwell  
For: **SORTATION CONVEYOR**

MAIL STOP: Patent Application  
Commissioner For Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION OF JAMES R. McCARTHY UNDER 37 C.F.R. § 1.132**

Dear Sir:

I, James R. McCarthy (hereinafter "Declarant"), declare as follows:

1. I am the President of Intelligrated, Inc. ("Intelligrated"), a position I have held since the formation of Intelligrated in September 2001. Intelligrated is the assignee of the above identified application (" '070 application").
2. I have read and understand the '070 application. I have read claims 13-53 and 174, and claims 175 and 176 (collectively "elected claims") of the '070 application, which are being added by the Amendment And Response being filed concurrently herewith.
3. Intelligrated currently manufactures and sells a sortation conveyor which is sold in the United States under the trademark "Intellisort" ("Intellisort sorter"). The Intellisort sorter has been sold in the United States since about 2003. The configuration of the Intellisort sorter, in all versions ever sold from inception to date, is substantially the same as shown in Figures 1-7 of the '070 application. The Intellisort sorter has an endless conveying surface ("conveyor") that moves in a longitudinal direction and that carries sliding pushers with it longitudinally, with the sliding pushers being moveable laterally across the conveyor in response to a command by a control system. The Intellisort sorter includes a plurality of divert locations at which articles conveyed on the sorter are directed from the sorter's conveying surface transversely to a respective divert by selectively diverting the pushers. Each divert location includes a switch, and a divert guide path disposed downstream of the switch. The divert guide path has an arcuate portion with an entrance disposed at a divert angle of less than 20°, and has a linear portion disposed upstream of the arcuate portion, and has a linear portion disposed downstream of the arcuate portion. The Intellisort sorter may be considered as having an initial contact zone, and the divert guide path as having an initial contact zone portion disposed within the initial contact

zone, with the first portion of the initial contact zone portion is disposed at a divert angle of less than 20°.

4. I have compared the elected claims to the configuration of the Intellisort sorter. The Intellisort sorter falls within the scope of at least claims 13-18, 21, 23, 24, 26-42, 44 and 45. This is borne out by a comparison of the features described in paragraph 3 above and the limitations of these claims.

5. The configuration of the Intellisort sorter, as described in paragraph 3 above, which falls within the scope of the claims as described in paragraph 4 above, allows the Intellisort sorter to operate at speeds in excess of 600 feet per minute, including in excess of 650 feet per minute, and maintain control of the conveyed articles when they are being diverted. When the Intellisort sorter is operated at speeds slower than 600 feet per minute, this configuration of the Intellisort sorter provides improved control over conveyed articles being diverted. In particular, the configuration of the divert guide path is such that the force with which the article is contacted when divert of the article is initiated is sufficiently low enough to maintain control at longitudinal speeds in excess of these speeds, and thus a higher throughput (i.e., the number of articles per minute that can be successfully diverted) achieved, in excess of 300 cases per minute for 17" cartons, or to provide improved control at lower longitudinal speeds and lower throughput rates.

6. Intelligrated sells the sorter as part of a larger system of conveyor equipment which, when combined with the sorter, provides an integrated means to route and control the distribution of light to medium duty packages for its customers. The speed and divert rate or throughput capability of the sorter is critical to a buyer's purchasing decision. If there are issues with the ability of a sorter to meet the performance and throughput requirements for the conveyor system, buyers would not consider Intelligrated as a conveyor system supplier and would purchase their system or sorter from others.

7. Decisions to automate the handling of packages are made at the highest levels of an organization; the outcome of which represent extraordinarily large capital purchases, investments in real estate, consolidation of less productive distribution centers within the region, among other sizeable changes in how a retail company distributes inventory to its store fronts. These decisions are made only after significant due diligence by a customer's operations, engineering and information technology personnel. A wrong decision more than destroys a career; the manner in which a retail company distributes its products to its store fronts determines whether that company will remain in business.

8. The selling process is typically 6-8 months in duration, involving teams of customer and Intelligrated personnel alike. During this time, Intelligrated and its competitors typically develop detailed description of operations and other application concepts that illustrate approaches to manage the current and future material handling capability of a given distribution center. Through this process, Intelligrated and its customers exchange concepts, equipment layouts, product specifications, device alternatives, software functionality and interfaces and the like to arrive at an integrated bid specification. Evaluating material handling suppliers like Intelligrated, customers will review a supplier's demonstrated capability to handle and control retail packages within the parameters of that customer's selected distribution concept. Customers will visit and

interview the distribution management of other Intelligrated customers to validate the full potential of the installed conveyor systems in operation. Site visits, further collaborative exchanges, proposal presentations and analyses of a supplier's production capacity are all typical events that take place before a customer selects suppliers, such as Intelligrated.

9. In the 2002 timeframe, Intelligrated did not have any meaningful way to demonstrate the capability of its sorters. As a result, Intelligrated invested over \$1,000,000 and dedicated 40,000 square feet of its own facility to construct a demonstration loop that simulates a live application of its sortation capability, the means to control its sorter, and its integration with other conveyor equipment offered by Intelligrated.

10. As of December, 2001, Intelligrated had thirty one employees. Between 2001 and 2003, Intelligrated's workforce grew by another 200 employees. During this time period, I instructed Intelligrated engineers to develop a "me too" sortation capability, a sorter equivalent to the function and performance capabilities of Intelligrated's competitors. This sorter, which was the only sorter configuration Intelligrated offered for sale during this time, diverted packages along straight divert guide paths downstream of the switch at each divert location. The divert guide paths were disposed at a single, constant angle of 20° or 30°, equal to the final divert angle, throughout their length, extending between the switch and the return. The exit angles of the switch guide paths of the switches matched the angle of the divert guide paths. The maximum speed at which such sorters were operated was 1) 550 feet per minute, sorting 17" packages that divert at a 20° angle and 2) 350 feet per minute, sorting 17" packages at a 30° divert angle. At these speeds and corresponding divert angles, all conveyor suppliers experienced difficulty in controlling packages during divert. The maximum sustainable throughput rate was 220 cartons per minute, diverting 17" inch along a 20° divert and only 140 cartons per minute sorting 17" packages at a 30° divert angle.

11. During this time period, Intelligrated's competitors also sold sorters having substantially the same configuration as described in paragraph 9 above, functioning substantially the same way, having substantially the same maximum speed and maximum throughput ("Market Rate").

12. Between September 2001 and March 2003, Intelligrated encountered substantial difficulty selling sorters at the Market Rate. During this time period, Intelligrated made about 100 proposals to provide equipment and services, including 35 proposals that included the Intelligrated sorter as described in paragraph 9 above. Intelligrated sold only two sorters during this period. I attribute the difficulty to (a) Intelligrated being a new company while substantially all of its competitors had been around for at least 40-50 years, and (b) Intelligrated's sorter not having higher throughput, better control of articles during divert, or being capable of being operated at higher speeds in comparison to the sorters offered by Intelligrated's competitors. The two sorters sold by Intelligrated during this time period were sold based on long standing personal relationships between the customers' purchasing agents and certain Intelligrated employees. It became clear to me that Intelligrated could not survive having mere Market Rate parity.

13. Because of the low sales volume, Intelligrated laid off approximately fifty employees during 2003. Intelligrated's board of director's were dissatisfied by the amount of funding required to run Intelligrated and the lack of meaningful sales. As a result, Intelligrated's board of

directors commissioned a market study to evaluate whether to continue to invest in Intelligrated. At that point in time, it was my belief that Intelligrated would cease operations by the summer of 2003 if the dollar volume of Intelligrated's sales did not increase markedly.

14. In early 2003, Intelligrated began to develop a proposal to Big Lots, Inc. ("BigLots!") for the delivery of a conveyor system which included a sorter. Big Lots! restricted bidders to only suppliers which could demonstrate a conveyor system with a sustained sortation rate of at least 235 cartons per minute, sorting 17" cartons at a 20° divert angle. I personally invited BigLots! executives to tour Intelligrated during the pre-proposal period. BigLots! would not visit Intelligrated nor consider Intelligrated a viable competitor for their business unless Intelligrated could demonstrate its capability to sort 17" cartons at a sustained rate of 235 cartons per minute at a 20° divert angle.

15. Competitors for the BigLots! Project included Siemens, HK Systems and FKI – each dominant competitors in the high speed sortation space for decades. None of these competitors could demonstrate a sustained sortation rate of 235 cartons per minute with 17" packages. Only as a result of the Intellisort sorter as described and discussed herein was Intelligrated able to demonstrate this sortation rate to BigLots!. Furthermore, in order to improve its chances of obtaining this business from Big Lots!, Intelligrated committed to providing within a year an Intellisort sorter capable of a sustained rate of at least 300 cartons per minute, handling 17" packages at a 20° divert angle. Intelligrated was awarded the contract by Big Lots!, and installed the system with the Intellisort sorter on or about August 21, 2003. Using the Intellisort sorter, BigLots! is currently operating the Intellisort sorter at this increased rate.

16. Intelligrated became the only material handling company capable of demonstrating a sustained sortation capability of 300 cartons per minute, diverting 17" packages at a 20° divert angle. Just as important, the Intellisort sorter performs at this level while maintaining carton control, thereby minimizing package damage and maximizing sortation throughput at rates never achieved by its competitors. Such market notoriety established Intelligrated as the predominant leader in high speed sortation and enabled Intelligrated to grow at the rates generally described under paragraph 17 below.

17. Following its introduction with the BigLots! Project as described in paragraphs 14, 15 above, the Intellisort sorter met with immediate commercial success. In 2003, Intelligrated booked the sale of seven systems which included the Intellisort sorter, for approximately \$26,000,000 in new business. As a result of the BigLots! implementation of Intellisort, Intelligrated began demonstrating the Intellisort sorter capability to other customers, propelling Intelligrated as a market leader in ultra high speed sortation capability. The table below sets forth the new business recorded by Intelligrated and sales revenue that results. Since 2003, Intelligrated has sold only the Intellisort sorter.

	<b>Bookings</b>	<b>Sales</b>
Fiscal 2002	\$ 18,477,741	\$ 17,364,647
Fiscal 2003	\$ 52,849,858	\$ 28,875,282
Fiscal 2004	\$ 29,809,163	\$ 39,250,347
Fiscal 2005	\$ 68,174,649	\$ 38,018,625
Fiscal 2006	\$ 117,976,932	\$ 102,731,898
Fiscal 2007	\$ 205,650,919	\$ 142,534,944
Fiscal 2008 Budget	\$ 266,379,552	\$ 200,299,621

Exhibit I graphically illustrates these numbers. The term “Bookings” means new business or contracts signed by Intelligrated customers from which sales revenue is generated. “Sales” means the recognition of revenue derived by the bookings as Intelligrated performs its contract obligations.

18. The commercial success of the Intellisort sorter as described in herein is entirely due to the performance of the Intellisort sorter, particularly the ability of the Intellisort sorter to maintain control at higher throughput rates as well as to provide improved control at lower throughput rates, which results from the configuration of the Intellisort sorter, which falls within the scope of the claims as described in paragraph 3.

19. Prior to the introduction of the Intellisort sorter, Intelligrated did not have a dominant market position. Exhibit II is a graph of annual new business booked by US conveyor manufacturers, based on data published by Conveyor Equipment Manufacturers Association. By reference to Exhibit II, Intelligrated’s new business bookings represented about 1.1% of 2002 annual booked in the market space in which Intelligrated competes. In 2003, which included the Intellisort sorter new business bookings, Intelligrated’s represented about 4.3% of the market. In 2004, Intelligrated’s new business bookings represented about 2.9%; in 2005, Intelligrated’s new business bookings represented about 6.1%; in 2006, Intelligrated’s booked sales represented about 10.7%; in 2007, Intelligrated’s new business bookings represented about 17.4%.

20. While Intelligrated grew substantially during the 2003-2007 period, its market remained flat. New business bookings in this industry were rising substantially from 1998 to 2000; however this trend rapidly discontinued and fell significantly between 2000 to 2004, when new business bookings dropped to less than 56% of the 2000 level, increasing only about 16% from 2004 to 2007. From 2004 to 2007, Intelligrated’s new business bookings increased 590%, due entirely to the commercial success of the Intellisort sorter as discussed herein.

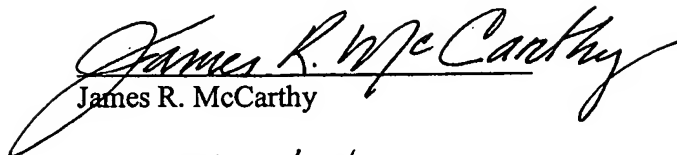
21. The overwhelming commercial success of the Intellisort is solely responsible for Intelligrated being able to remain in business past August 2003.

22. The Declarant states that all statements made herein of actual knowledge are true, or if made on information and belief are believed to be true.

23. The Declarant further states that all statements made herein were made with knowledge that willful false statement sand the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any such willful false statements may jeopardize the validity of this patent application or any patent issuing thereon.

Serial No. 10/800,070  
Customer No. 26874

**Declaration of James R. McCarthy**

  
James R. McCarthy

3/25/08

Date: March 25, 2008

# Intelligrated Inc. Bookings and Sales History

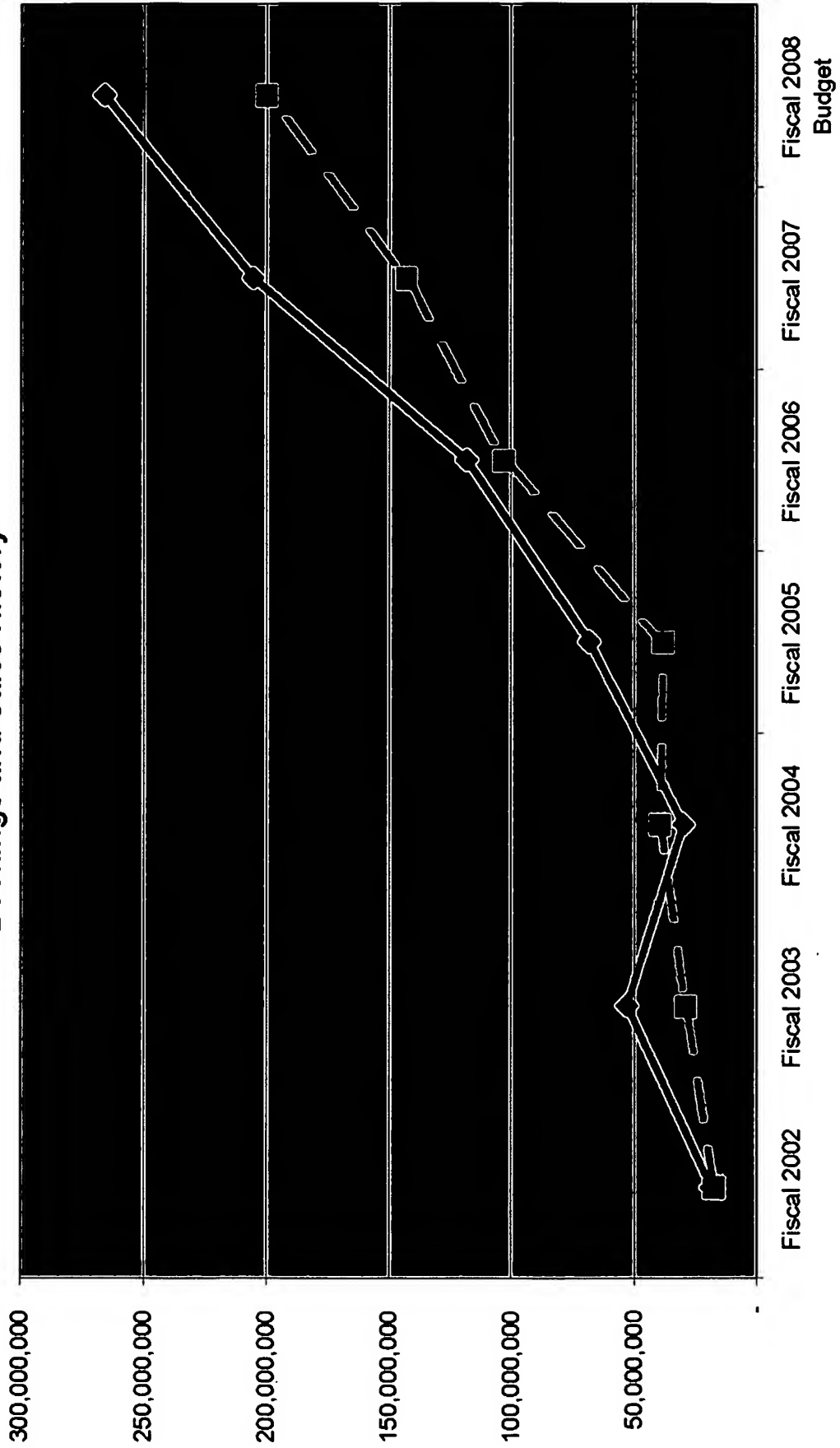


EXHIBIT I

—◆— Bookings    —■— Sales

# CEMA - Unit Handling Conveyors- 12 Month Booked Sales

December 2007 – Sales Figures in Millions

